Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. Cancelled

2. (Previously Presented) The magnet pole position detector as defined in Claim 16, wherein the plates form a maximum flux density on both ends of the plates on the circular path

3. Cancelled

4. (Previously Presented) The magnet pole position detector as defined in Claim 16, wherein an interval between adjacent plates is set to be narrower than an interval between adjacent magnets.

5. (Previously Presented) The magnet pole position detector as defined in Claim 16, wherein the rotor forms a part of an electric motor that has a stator provided with a plurality of coils, and wherein the rotor is disposed on an inner side of the stator.

6. (Previously Presented) The magnet pole position detector as defined in Claim 16, wherein the rotor forms a part of an electric motor that has a stator provided with a plurality of coils and wherein the rotor is disposed on an outer side of the stator.

7. (Previously Presented) The magnet pole position detector as defined in Claim 16, wherein each of the plates comprises a magnetic passage transmitting magnetic flux of the corresponding magnet to the plates.

8. (Previously Presented) The magnet pole position detector as defined in Claim 16, wherein the rotor further comprises a rotor core retaining the magnets, and the plates are fixed to the rotor core.

9. Cancelled

10. (Previously Presented) The magnet pole position detector as defined in Claim 16, wherein each of the magnets comprises a pair of magnet components that have equal polarity.

11. Cancelled

12. Cancelled

13. (Previously Presented) The magnet pole position detector as in claim 16, wherein the magnetic sensor comprises three sensors that are positioned at approximately 30-degree intervals.

14. Cancelled

15. Cancelled

16. (Previously Presented) A magnet pole position detector for a rotor that has a plurality of magnets disposed on a circular periphery, and rotates with a rotation shaft, the detector comprising:

plates of the same number as the magnets, the plates being made of a magnetic material, each of the plates being disposed on the rotor at a position along a circular path nearby a corresponding magnet and magnetized by leakage flux of the corresponding magnet, wherein the plates are fixed to an end face of the rotor, the end face facing in a direction along the rotation shaft; and

a magnetic sensor outputting a signal in response to a variation of a magnetic flux density on the circular path.

17. (Previously Presented) A magnet pole position detector for a rotor that has a plurality of magnets disposed on a circular periphery, and rotates with a rotation shaft, the detector comprising:

plates of the same number as the magnets, the plates being made of a magnetic material, each of the plates being disposed on the rotor at a position along a circular path nearby a corresponding magnet and magnetized by leakage flux of the corresponding magnet, wherein the rotor comprises a rotor core retaining the magnets, and wherein the plates are fixed to the rotor core via an end plate made of a non-magnetic material; and

a magnetic sensor outputting a signal in response to a variation of a magnetic flux density on the circular path.

18. (Previously Presented) A magnet pole position detector for a rotor that has a plurality of magnets disposed on a circular periphery, and rotates with a rotation shaft, the detector comprising:

plates of the same number as the magnets, the plates being made of a magnetic material, each of the plates being disposed on the rotor at a position along a circular path nearby a corresponding magnet and magnetized by leakage flux of the corresponding magnet, wherein the plates are provided in the form of a disk in which adjacent plates are separated by a radial groove formed on the disk; and

a magnetic sensor outputting a signal in response to a variation of a magnetic flux density on the circular path.

19. (Cancelled)

20. (Cancelled)

21. (Cancelled)

22. (Cancelled)

23. (Cancelled)

24. (Cancelled)

25. (Cancelled)

26. (Cancelled)

27. (Currently Amended) ~~**The detector of claim 19,**~~ **A magnet pole position detector for a rotor that has a plurality of rotating magnets disposed on a circular periphery, the detector comprising:**

plates f the same number as the magnets, the plates being made of a magnetic material, each of the plates being disposed on the rotor at a position along a circular path nearby a corresponding magnet and magnetized by leakage flux on the corresponding magnet; and

a magnetic sensor adapted to output a signal in response to a variation of a magnetic flux density on the circular path;

wherein the plates are provided in the form of a disk in which adjacent plates are separated by at least one radial groove formed on the disk, and wherein the magnetic flux is concentrated on both sides of at least one of the at least one radial groove.

28. (Cancelled)

29. (Cancelled)

30. (Currently Amended) ~~**The detector of claim 28,**~~ **A magnetic pole position detector for a rotor that has a plurality of rotating magnets disposed on a circular periphery, the detector comprising:**

plates of the same number as the magnets, the plates being made of a magnetic material, each of the plates being disposed on the rotor at a position along a circular path nearby a corresponding magnet and magnetized by leakage flux on the corresponding magnet; and

a magnetic sensor adapted to output a signal in response to a variation of a magnetic flux density on the circular path;

wherein the detector is configured such that the output signal **undergoes a sharp variation as the plates rotate and that the output signal** has a maximum positive value when facing the end of a plate corresponding to the north pole of a magnet.

31. (Previously Presented) The detector of claim 30, wherein the detector is configured such that the output signal has a maximum negative value when facing the end of a plate corresponding to the south pole of a magnet.

32. (Previously Presented) The detector of claim 31, wherein the detector is configured such that a maximum positive value and a maximum negative value is obtained within about 4^{O} or less of magnet rotation.

33. (Previously Presented) The detector of claim 31, wherein the detector is configured such that a maximum positive value and a maximum negative value is obtained within about 2^{O} or less of magnet rotation.

34. (Cancelled)

35. (Previously Presented) A magnet pole position detector for a rotor that has a plurality of magnets disposed on a circular periphery, rotates with a rotation shaft, and forms a part of an electric motor that has a stator provided with a plurality of coils, the detector comprising:

plates of the same number as the magnets, the plates being made of a magnetic material, each of the plates being fixed on an outer periphery of the rotor via a non-magnetic material at a position along a circular path nearby a corresponding magnet and magnetized by leakage flux of the corresponding magnet; and

a magnetic sensor outputting a signal in response to a variation of a magnetic flux density on the circular path.

36. (Previously Presented) The magnet pole position detector as defined in Claim 35, wherein the non-magnetic material is arranged on an outer periphery of the rotor.

37. (Cancelled)

38. (Cancelled)

39. (Currently Amended) The detector of claim ~~37~~ 35, wherein the magnets are configured such that the magnetic flux is concentrated on the ends of the plates.

40. (Currently Amended) The detector of claim ~~37~~ 35, wherein the magnets are positioned with alternating polarity such that the magnetic flux is concentrated on the ends of the plates.

41. (Previously Presented) The detector of claim 40, wherein the alternating polarity of the magnets is expressed on the circular periphery.

42. (Currently Amended) The detector of claim ~~37~~ 35, wherein the magnets are positioned in magnet pairs, the pairs having equal polarity such that the magnetic flux is concentrated on the ends of the plates.

43. (Previously Presented) The detector of claim 42, wherein the magnet pairs are positioned to form a single magnetic pole.

44. (Currently Amended) The detector of claim ~~37~~ 35, wherein the plates are provided in the form of a disk in which adjacent plates are separated by at least one radial groove formed on the disk, and wherein the magnetic flux is concentrated on both sides of at least one of the at least one radial groove.

45. (Currently Amended) The detector of claim ~~37~~ 35, wherein the detector is configured such the output signal undergoes a sharp variation as the plates rotate.

46. (Previously Presented) The detector of claim 45, wherein the detector is configured such that the sharp variation comprises a variation from a positive value to a negative value.

47. (Previously Presented) The detector of claim 45, wherein the detector is configured such that the output signal has a maximum positive value when facing the end of a plate corresponding to the north pole of a magnet.

48. (Previously Presented) The detector of claim 47, wherein the detector is configured such that the output signal has a maximum negative value when facing the end of a plate corresponding to the south pole of a magnet.

49. (Previously Presented) The detector of claim 48, wherein the detector is configured such that a maximum positive value and a maximum negative value is obtained within about 4^{O} or less of magnet rotation.

50. (Previously Presented) The detector of claim 48, wherein the detector is configured such that a maximum positive value and a maximum negative value is obtained within about 2^{O} or less of magnet rotation.